

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

- 1                   1.       (Previously presented) A micro electromechanical systems (MEMS)  
2 device comprising:  
3                   a scanning probe microscopy (SPM) component;  
4                   one or more fluidic channels formed in the SPM component;  
5                   one or more control valves to control a flow of fluid in the one or more fluidic  
6 channels; and  
7                   one or more movable members formed in the SPM component, at least one fluidic  
8 channel being formed in each movable member, wherein fluid flow through the at least one  
9 fluidic channel produces movement in the movable member.
- 1                   2.       (Currently amended) A method for nanomachining using ~~the a~~ MEMS  
2 device, ~~the MEMs device comprising: of claim 1.~~  
3                   a scanning probe microscopy (SPM) component;  
4                   one or more fluidic channels formed in the SPM component;  
5                   one or more control valves to control a flow of fluid in the one or more fluidic  
6 channels; and  
7                   one or more movable members formed in the SPM component, at least one fluidic  
8 channel being formed in each movable member, wherein fluid flow through the at least one  
9 fluidic channel produces movement in the movable member.
- 1                   3.       (Previously presented) A micro electromechanical systems (MEMS)  
2 device comprising:  
3                   a scanning probe microscopy (SPM) component;

4 at least one fluidic channel formed in the SPM component; and  
5 a venturi tube formed along a portion of the fluidic channel,  
6 wherein a vacuum can be developed by a flow of a gas or fluid through the  
7 venturi tube.

1 4. (Currently amended) A micro electromechanical systems (MEMS) device  
2 comprising:

3 a scanning probe microscopy (SPM) component;  
4 one or more movable members formed in the SPM component;  
5 a fluidic channel formed in a first movable member, the fluidic channel  
6 configured to deliver fluid to a tip of the SPM component;  
7 one or more control valves formed in the SPM component to control a flow of  
8 fluid in the fluidic channel; and  
9 an amount of an isotope disposed along the fluidic channel,  
10 wherein the particles emitted by the isotope can be delivered by a fluid flowing in  
11 the fluidic channel to the tip to affect the charge distribution in a region about the tip.

1 5. (Currently amended) A method for performing nanomachining on a  
2 workpiece using ~~the~~ a MEMs device, the MEMs device comprising:

3 a scanning probe microscopy (SPM) component;  
4 one or more movable members formed in the SPM component;  
5 a fluidic channel formed in a first movable member, the fluidic channel  
6 configured to deliver fluid to a tip of the SPM component;  
7 one or more control valves formed in the SPM component to control a flow of  
8 fluid in the fluidic channel; and  
9 an amount of an isotope disposed along the fluidic channel,

10                    wherein particles emitted by the isotope can be delivered by a fluid flowing in the  
11 fluidic channel to the tip to affect charge distribution in a region about the tip, of claim 4 wherein  
12 the particles are delivered to the tip.

6 - 7. (Canceled)

1                    8. (Previously presented) The MEMS device as recited in claim 4 wherein  
2 the isotope is Americium 241.

1                    9. (Original) The MEMS device as recited in claim 4 wherein the amount of  
2 isotope is disposed in a single isotopic region on the SPM device, wherein the single isotopic  
3 region contains 1 microcurie or less of radioactivity.

10 - 25. (Canceled)

1                    26. (Currently amended) A method of performing a nanomachining operation  
2 comprising manipulating a device ~~as recited in claim 4~~ relative to a surface, including  
3 constraining motion of the device in a specific or constrained region,  
4                    the device comprising:  
5                    a scanning probe microscopy (SPM) component;  
6                    one or more movable members formed in the SPM component;  
7                    a fluidic channel formed in a first movable member, the fluidic channel  
8 configured to deliver fluid to a tip of the SPM component;  
9                    one or more control valves formed in the SPM component to control a  
10 flow of fluid in the fluidic channel; and  
11                    an amount of an isotope disposed along the fluidic channel,  
12                    wherein particles emitted by the isotope can be delivered by a fluid  
13 flowing in the fluidic channel to the tip to affect charge distribution in a region about the  
14 tip.

1                   27.     (Previously presented) A method as in 26 in which the nanomachining  
2 operation uses chemical or biological chips or devices in which material therefore is placed in  
3 wells in a regular arrangement on a plane or surface(s).

1                   28.     (Previously presented) A method as in 27 in which the material is DNA  
2 which has been marked optically, electrically or chemically so as to interact with optical,  
3 electrical or chemical detectors or emitters associated with or integrated in the device.

29. - 37.       (Canceled)

1                   38.     ((Previously presented)) The MEMS device of claim 1 further comprising  
2 a cantilever formed in the SPM component and operatively coupled to the moveable members,  
3 wherein movement in the movable members serves to move the cantilever.

39 - 40.       (Canceled)

1                   41.     (Previously presented) The MEMS device of claim 4 wherein the fluid  
2 flow comprises one of moving fluid from the fluidic channel formed in the first moveable  
3 member to create at least a partial vacuum thereby effecting movement of the first moveable  
4 member and moving fluid into the fluidic channel formed in the first moveable member wherein  
5 a force of the fluid effects movement of the first moveable member.

1                   42.     (Previously presented) The MEMS device of claim 4 wherein fluid flow  
2 through the at least one fluidic channel produces movement in the first movable member.

1                   43.     (Previously presented) The MEMS device of claim 42 further comprising  
2 a cantilever formed in the SPM component and operatively coupled to the moveable members,  
3 wherein a fluidic channel is formed in each moveable member, wherein movement in the  
4 movable members serves to move the cantilever.

1                   44.     (Previously presented) The MEMS device as recited in claim 4 wherein  
2 the moveable members act as passive elements.

1                   45.     (Previously presented) The MEMS device as recited in claim 4 wherein  
2 the moveable members produce electrical signals during movement, wherein the electrical  
3 signals serve to control subsequent movements.

1                   46.     (Previously presented) The MEMS device as recited in claim 45 wherein  
2 the electrical signals serve to obtain one of a predetermined motion of a first moveable member,  
3 a predetermined displacement of the first moveable member, a zero displacement position of the  
4 first moveable member.

1                   47.     (Previously presented) The MEMS device as recited in claim 4 further  
2 comprising a circuit for monitoring changes in charge accumulation in the fluidic channel as the  
3 isotope is moved by fluid flow.

1                   48.     (Currently amended) A method for nanoelectric discharge machining  
2 using ~~the a~~ MEMS device ~~as recited in claim 4~~, the method comprising imaging a surface to be  
3 machined and measuring surface features of the surface to be machined, the imaging and  
4 measuring being performed using a scanning probe microscopy technique

5                   the MEMs device comprising:

6                   a scanning probe microscopy (SPM) component;

7                   one or more movable members formed in the SPM component;

8                   a fluidic channel formed in a first movable member, the fluidic channel

9                   configured to deliver fluid to a tip of the SPM component;

10                  one or more control valves formed in the SPM component to control a  
11                  flow of fluid in the fluidic channel; and

12                  an amount of an isotope disposed along the fluidic channel,

13                   wherein particles emitted by the isotope can be delivered by a fluid  
14                   flowing in the fluidic channel to the tip to affect charge distribution in a region about the  
15                   tip.

49 - 58.           (Canceled)

1                   59.     (Previously presented) A micro electromechanical systems (MEMS)  
2     device comprising:  
3                   a scanning probe microscopy (SPM) component;  
4                   a fluidic channel formed in the SPM component, the fluidic channel configured to  
5     deliver fluid to a tip of the SPM component;  
6                   an amount of an isotope disposed along the fluidic channel, wherein the particles  
7     emitted by the isotope can be delivered by a fluid flowing in the fluidic channel to the tip to  
8     affect the charge distribution in a region about the tip; and  
9                   a circuit for monitoring changes in charge accumulation in the fluidic channel as  
10    the isotope is moved by a flow of fluid.